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# The Role of Transport in Formation of the «Advancement Effect» in Ancient and Medieval Societies



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## ABSTRACT

Transport has played a very significant role in formation and development of ancient and medieval civilisations. At the same time, since ancient times, the transport factor has contributed to advancement of various social communities and societies (manifested in achievement of leadership by the corresponding cities, regions, countries) and formation of the «advancement effect», the essence of which is the possibility of more efficient use of available resources and implementation of existing advantages to ensure successful development.

The influence of transport on formation of the «advancement effect» of societies is based on a wide range of socio-economic effects that are generated during movement of goods and passengers. These include, inter alia, adding value to goods as a result of movement, stimulating growth in the volume, scale and efficiency of goods production, disseminating knowledge, ideas and stimulating innovation.

Because of the effects generated by transport activities, the centres of this activity develop rapidly and achieve economic, and

often also political and cultural leadership. At the same time, transport leadership is associated both with geographical location and with socio-economic (primarily institutional) conditions that provide the opportunity to implement the benefits of the geographical location.

The provided analysis covering approximately five thousand years of existence of ancient and medieval civilisations, using many examples, showed that transport indeed played an important role in advancement of certain societies localised within cities, regions and countries. Their advancement to leadership positions was achieved due to the synergy of an advantageous geographical location, innovative development of technical means of transport and institutions that facilitate the efficient conduct of transport activities and development of transport and commercial ecosystems. In turn, the cessation or significant weakening of the beneficial effects of the transport factor led to the loss of leadership positions by societies and the decline of the corresponding economic centres.

**Keywords:** transport, «advancement effect», ancient civilisations, the Middle Ages, economic centres, transport and commercial ecosystem, trade and transport activities.

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## INTRODUCTION

To understand the long-term developments of transport, assess its role in modern society and future prospects, historical analysis is very productive [1–11].

Transport had played a very significant role in formation and development of ancient civilisations [3; 12], and then, in the Middle Ages, became a factor in overcoming destructive socio-economic phenomena (such as naturalisation of the economy and disurbanisation), searching for new options for trade and economic relations [13–15], and, having reached a high level of development, contributed to the entry of mankind in the era of modern times, and then in the era of modern economic growth [7; 14; 16].

Along with considering the role of transport in global socio-economic history, it is of interest to analyse it in specific historical periods and in certain regions of the world. This «ascension to the concrete» provides for better understanding of the importance of the transport factor in socio-economic development. To solve this problem, it seems very descriptive to reveal the role of transport in implementation of the «advancement effect» in the process of socio-economic development.

*The objective* of the study is to identify the role of transport in formation of the «advancement effect» in ancient and medieval societies using the method of historical analysis.

## RESULTS

### **Essence of «Advancement Effect»**

The essence of the «advancement effect» is that, under the influence of the emergence of such a favourable combination of internal characteristics of an individual or society, which can be interpreted as a relative advantage, such an individual is promoted to leadership positions in society (i. e., individuals united within the framework of a particular organisation or geographically localised community – city, region, country) among other similar societies.

As a result of advancement, the individual's «previously hidden (unclaimed) abilities manifest themselves and new ones appear and develop» [17, p. 71].

When society is advancing, in turn, it becomes possible to more effectively use existing resources and implement the advantages that it has, which allows it to ensure its leadership and contributes to development associated with formation of a wide range of effects. Taken

together, this can be defined as the «advancement effect» of society.

When analysing the advancement of certain societies (manifested in achievement of leadership by the corresponding centres of economic activity, regions, countries), the role of various factors is highlighted, but attention to the role of transport is often not focused [18–22].

At the same time, it was the transport factor that played an important role in advancement of various societies since ancient times [6; 7; 12] and formation of a «advancement effect», which deserves substantive consideration.

### **Economic Basis of the Influence of Transport on Formation of the «Advancement Effect»**

The influence of transport on formation of the «advancement effect» of societies is based on those socio-economic effects that are generally generated during movement of goods and passengers.

When goods are transported, their value increases [23]. This may be due to the following reasons.

The first reason is the greater scarcity of the product in the destination region compared to the origin region, as a result of which the product in the destination region is used to satisfy more important needs and, therefore, has greater value. This reason can be defined as the «good's rarity factor».

The second reason («the factor of efficient use of goods») is the possibility of more efficient use of goods in the destination region compared to the departure region. For example, for raw materials, this may be the opportunity for deeper processing and obtaining finished products that have a higher value than in the region of origin. And since the value of a resource is determined by the value of the product produced using it [24], an increase in the cost of the resulting product also increases the value of the resource.

The third possible reason is the higher level of per capita income in the destination region («consumer solvency factor»), as a result of which a product used even to satisfy needs that are not more significant than in the origin region may have a higher monetary value.

In each specific case, the excess of the value of the goods at the point of destination over the value at the point of departure can be explained by either one of these factors or their interaction. Moreover, in the latter case, the action of



individual factors may be in the opposite direction. For example, a product may be transported from a region with a high level of per capita income to a region where the level of income is significantly lower. But, due to its rarity in the destination region, it may have much greater value there than in the origin region, despite the lower purchasing power of consumers.

A special case is when some benefit in a given region was not economic at all before the opening of transport links. In this case, transport communication gives an economic character to a previously non-economic good and forms its value, the basis for which is the value of this good in the destination region.

With development of transportation links, the value and rarity of goods in the regions exchanging goods, as well as per capita income, do not remain unchanged. «Long-term interconnected processes of expansion of the geographical area of sales of goods, growth of volumes, scale and efficiency of production» are «launched» [25, p. 6], as a result of which all these parameters change, and a wide range of socio-economic effects is formed.

«As a result of passenger transportation, economic effects are also formed, depending on the purpose of the trip» [26, p. 16]. It should be noted that, in addition to achieving the own goals of people making trips, these trips, one way or another, are associated with dissemination of knowledge, ideas and stimulation of innovation [7; 12; 27], which is important for socio-economic development.

Due to the effects generated by transport activities, the centres of this activity develop rapidly and achieve economic, and, often, closely related political, as well as cultural, leadership.

In turn, transport leadership is associated not only with geographic location, but also with socio-economic (and above all, institutional [27]) conditions that provide the opportunity to implement the benefits of geographic location. In other words, an advantageous geographical location creates the preconditions for formation of an «advancement effect» based on transport activities but does not guarantee it.

### **The Role of Transport in Formation of the «Advancement Effect» in the Ancient World**

In the modern world, key importance for successful, leading development of cities and regions obtains their inclusion in global chains

of transport and logistics links [28]. However, the influence of transport links on economic, social and cultural progress was detected already in antiquity. Moreover, a number of authors reasonably note the primacy of transport factors in formation of the most ancient «river» civilisations [29; 30] in the valleys of the «great rivers» (Nile, Tigris and Euphrates, Indus, Ganges, Yellow River, Yangtze) [31].

Thus, in the most ancient period of the history of Egyptian civilisation (the end of 4<sup>th</sup> millennium BC) advancement of Upper Egypt and its most important city of Thebes (Luxor) has reason to be associated with the advantageous geographical position of Thebes «in the great bend of the Nile, where the river is separated from the Red Sea by just one hundred miles» [12, p. 232], which created the possibility of contacts with the Sumerian civilisation developing in the same period in Southern Mesopotamia. In turn, the subsequent unification of Upper and Lower Egypt under the leadership of the first can be explained by the fact that it was in Upper Egypt that the sail was mastered, which gave it a key transportation advantage [32].

The basis of the «river» civilisations of antiquity was agriculture. The development of transport gave them the opportunity to implement their comparative advantages based on the exchange of surplus agricultural products for other necessary resources (metals, timber, etc.), which contributed to their advancement within the framework of the then Oecumene.

The use of sea communications allowed the formation of centres whose *basis* for existence and prosperity was the symbiosis of transport and commerce, which can be defined as a *transport and commercial ecosystem*.

In 3<sup>rd</sup> millennium BC, there was an advancement of the city of Dilmun, located on the island of Bahrain in the Persian Gulf, which flourished due to the transit trade in metals and luxury goods and the import of hundreds of tons of food delivered over hundreds of kilometres [33; 34]. Essentially, Dilmun was a port hub in the transport and commercial system that connected regions with access to the Persian Gulf and the Arabian Sea. The subsequent disruption of interregional trade flows led to the decline of Dilmun.

An even more striking and important example of advancement based on sea communications in the same era is the Minoan

civilisation on Crete, which «emerged and existed precisely due to intermediary international trade» [35, p. 265]. The Minoans managed to establish «thalassocracy» («sea dominion»), which meant «the complete dominance of the Cretan fleet in the Eastern Mediterranean» and «put Crete on a par with other great powers of antiquity» [36, p. 215].

Carrying out an intensive «exchange of not only goods, but also ideas» with various regions of the Mediterranean and Western Asia [37, p. 341], the Minoans received outstanding achievements in development of economy and culture. When, around 1450 BC, as a result of a volcanic eruption and a strong earthquake, the Minoan civilisation suffered a catastrophe, naval leadership for about two centuries passed to the Achaeans, who lived on the mainland coast of the Aegean Sea [37], «whose ships were saved from destruction by safe bays and harbours of the Peloponnese and Asia Minor» [35, p. 266]. This is a remarkable example of advancement to a vacated leadership position, which became possible not simply due to the fact that it became vacant, but due to the existing prerequisites – development of navigation among the Achaeans and the favourable geographical location of their settlements.

However, advancement of the Achaeans was not very long-term by historical standards. It ended in 13<sup>th</sup> – 12<sup>th</sup> centuries BC, when the balance in the Middle East was disrupted, favourable conditions for trade disappeared, and the Achaeans were forced to switch to autarky, during which the internal struggle for limited resources intensified, which led to «the decline of culture, oblivion of previous sources of inspiration and achievements» [38, p. 27].

A much greater historical role was played by emergence of competing Phoenician and Greek cities and the colonies they founded as leaders in Mediterranean navigation and trade in 1<sup>st</sup> millennium BC. [12; 39]. At the same time, advancement of Phoenician cities was particularly facilitated by their geographical location at the junction of the Mediterranean Sea and Middle Eastern overland trade routes [39].

As for the ancient Greek city-states, among them the most successful ones and those that made the greatest contribution to world civilisation were those whose development related to the sea. For example, Corinth [39], which was located on a narrow isthmus, due to

which it «had a unique opportunity to develop maritime connections with equal ease with both the Eastern and Western Mediterranean» [35, p. 319]. And, of course, Athens, the crowning achievement of Athens was creation under their auspices of a political union of Greek states (the so-called «Athenian Maritime Union»), which provided Athens with leadership in most of Greece for a certain time [35; 38].

The effective use of land communications has also contributed to advancement of cities and regions since ancient times.

So, already in 3<sup>rd</sup> millennium BC cities developed rapidly along the trade routes in Northern Mesopotamia and Syria, the most significant of which was the city of Ebla [40]. The transport capabilities of overland routes increased significantly after camels (instead of donkeys) were used as pack animals, which made it possible to transport twice as much cargo and do it twice as quickly [34].

The use of camel caravans radically increased the efficiency of using overland trade routes, and even, in some cases, made it possible to successfully compete with sea transport [12; 34]. This is one of the earliest examples of changes in the structure of the transportation market due to transport innovation. This is also a clear example of the fact that the socio-economic significance of promising transport innovations [41] was already evident in ancient times, including in formation of the «advancement effect». So, in 1<sup>st</sup> millennium BC the advancement of the states of South Arabia (the Sabeen Kingdom, etc.) took place, actively participating in international trade using caravans [39]. At the same time, in Southern Syria, Damascus, which was «the centre of the crossing of trade routes» [39, p. 73].

The examples of the transport and commercial basis for the emergence of states that in the future turned into large and warlike empires are of historical interest.

At the beginning of 2<sup>nd</sup> millennium BC, in Northern Mesopotamia, the city of Ashur is emerging – the core of the future Assyrian state, located at the intersection of key trade routes connecting the main regions of the Middle East [37; 40]. «Assyria played the role of a transfer point... in exchange between... various regions of Western Asia. Assyria was a state lying at the intersection of caravan routes, and this explained the significance that Assyria acquired in the history of the ancient world» [37, p. 151].



The advancement of Assyria over the course of about a thousand years occurred non-linearly, periods of success were followed by weakening and decline [42]. But, even during periods of weakening, the country continued to exist. In 1<sup>st</sup> millennium BC, i. e., during the so-called Neo-Assyrian period, the development of a trading state, in which initially significant rights belonged to the bodies of community-city self-government, began to develop into a military-bureaucratic despotism [42; 43]. This was accompanied by an active policy of conquest, as a result of which at the turn of 8<sup>th</sup> – 7<sup>th</sup> centuries BC Assyria turned into a «world» empire [40; 42]. During the period of maximum power, in the middle of 7<sup>th</sup> century BC, «its borders extended from Egypt... and... the Mediterranean to the Persian Gulf» [42, p. 126]. At this time, the centralisation of power and the regulation of all aspects of people's lives were also maximised; the economy was dominated by the state economy; mass deportations of conquered peoples were carried out [42; 43]. All this gave rise to social tension, leading to uprisings and palace coups. At the end of 7<sup>th</sup> century BC, weakened by internal conflicts, the Assyrian Empire collapsed under the blows of neighbouring states that rushed to take advantage of this and disappeared forever from world history. The example of Assyria shows that in the course of advancement, which initially had a transport and commercial basis, this basis can change dramatically, which leads to an increase in «fragility» (according to N. Taleb) of the social system and the likelihood of its rapid collapse with the appearance of «black swans» (sudden disasters) [44; 45].

Two and a half centuries after the fall of Assyria, on the other side of the Oecumene – in China – the rise of the kingdom of Qin, one of the seven states then existing in the country, began [46]. Initially it had an economic, including transport and commercial basis. «Important trade routes passed through Qin territory, and trade with neighbouring tribes was one of the sources of its enrichment» [46, p. 33]. (Another key source was the most fertile land in China.)

In the middle of 4<sup>th</sup> century BC radical reforms were carried out to «turn Qin into a military camp.» «All areas of activity that did not lead to an increase in the grain product,

population and army were declared harmful, as not bringing direct benefit to the state. These areas included trade, craft, science, and entertainment» [47, p. 20]. After carrying out reforms and strengthening the army, the country began expansion, which ended with creation of the Qin Empire, which united all of China. The previously developed management principles were extended to the entire territory of China and were further developed. At the same time, measures were also taken to improve transport. «In order to connect the capital with all regions of the state, [Emperor] Qín Shǐ Huáng-dì, ordered the construction of roads and transport canals. To preserve the roads, the axles of the carts were unified, since carts with long axles went out of track and spoiled the roads built in soft loess soil» [46, p. 192]. These measures, carried out in combination with establishment of a single system of weights and measures, a single coin, certainly contributed to development of transport links, trade, and the economy as a whole, and, accordingly, strengthened the empire.

But they were not the main ones in the Qin Empire, but the system of «total control», which «did not provide for any initiative and was designed for blind, precise execution of instructions issued from above...» [35, p. 233] and was supported by the most severe punishments. Labour obligations became widespread – people were en masse sent to build the Great Wall, canals, roads and palaces. «Many people died in all these works, the country's strength was mercilessly depleted» [47, p. 26]. All this caused growing tension among both the people and the elites. The Qin Empire collapsed as a result of uprisings in 207 BC, outliving its founder by only three years. This is another historical example of the emergence of «fragility» when replacing the transport and commercial prerequisites for advancement with completely different principles.

If sea communications played a leading role in development of some societies in the Ancient World, others – land and/or river communications, then the successful development and centuries-long, fairly stable existence of the Roman state (first the republic, then the empire) was supported by the synergy of both, which is discussed in detail in [7; 12]. This paper focuses on illustrative examples concerning individual



cities and provinces of the Roman Empire, as well as related regions outside the empire.

In 1<sup>st</sup> century AD the development of both maritime and caravan trade contributed to the prosperity of cities in the eastern provinces of the Roman Empire, such as Ephesus, Pergamum, Antioch and, especially Alexandria, through which large-scale trade was carried out with India. As a result, «during this period Alexandria became the largest port of the empire» [48, p. 130]. (However, under the conditions of the empire, the development of transport brought not only benefits, but also burdens: the fulfilment of transport and road duties placed a heavy burden on the population of the Roman provinces).

The combination of sea and caravan communications within the framework of the Roman-Indian trade ensured the prosperity of the states of South Arabia. However, the subsequent reorientation of trade relations to the use of the port infrastructure of Aksum, located on the opposite, African, shore of the Red Sea, became a factor in their decline [48].

In 2<sup>nd</sup> century AD, when the economy of the Roman Empire was at its peak and trade reached its greatest extent [7], the eastern cities of the empire, Palmyra, Damascus, and Petra, located on busy caravan routes, flourished. In the western provinces, «the city of Augusta Treverorum [present-day Trier in western Germany] flourished due to trade with the Germanic tribes and Eastern Europe; the city of Carnuntum grew rich because the so-called amber road [a trade route connecting the Baltic coast with Southern Europe] passed through it» [48, p. 215].

In 4<sup>th</sup> century, when the naturalisation of the economy and the general decline of the Roman Empire took place, these processes occurred differently in the western and eastern provinces. «... While the trade relations of the population of the western cities with the Trans-Rhine and Trans-Danubian peoples were almost completely interrupted, the trade relations of the eastern provinces with Persia, Arabia and other neighbouring countries... revived again» [48, p. 453]. As a result, the eastern provinces avoided the same decline in urban culture, disurbanisation and general socio-economic degradation that occurred in the west of the empire. This can be seen as one of the key reasons for the different fate of the Western and Eastern parts of the Roman Empire in the future:

if the first collapsed at the end of 5<sup>th</sup> century, the second (which went down in history as Byzantium) existed after that for almost a thousand years. Thus, the transport and commercial ecosystem is not only a factor in advancement of the society, but also insures it against regression, which inevitably occurs in the context of the decline of trade and transport activities.

In turn, the lack of conditions for dynamic development of communications and trade and transport activities in specific regions leads to their long-term socio-economic lag. A clear example is sub-Saharan Africa, whose lag behind the northern part of the continent, Asia and Southern Europe began to manifest itself already in antiquity. After formation of the Sahara Desert in 3<sup>rd</sup> millennium BC, most of sub-Saharan Africa found itself in a semi-isolated world, which had extremely limited external connections and poor internal communications: the natural and climatic conditions were unsuitable for camels and of little use for horses, so that loads were moved by land by porters, the possibilities of transportation along rivers were also limited, and wheeled transport was practically impossible [16; 40]. This meant extremely high transport costs, which practically acted as an economic barrier to large-scale exchange of goods and specialisation of production [49]. Accordingly, in conditions of extremely limited exchange opportunities, there was no incentive to produce anything beyond what was necessary for one's own consumption [40; 49], which means improving production methods and tools. The institutions that emerged under these conditions also did not stimulate development. The consequences of these problems, which formed in ancient times, were reflected throughout the history of the continent, right up to the present day.

### **The Role of Transport in Formation of the «Advancement Effect» in the Middle Ages**

During the Middle Ages, the beginning of which is usually attributed to the middle of 1<sup>st</sup> millennium AD, a serious transformation of trade and transport connections took place [13], which led to the emergence of new economic centres both on previously existing and on newly emerging communication routes – land, river, sea routes and, using (as far as possible)



modern terminology [50], on multimodal routes.

Already in the early Middle Ages, Constantinople became the largest centre of the Mediterranean [35; 51], and it retained this role for many centuries, including due to its extremely advantageous geographical position at the intersection of the most important sea and land trade routes: «merchants from all countries by sea and by land flocked to Constantinople to trade» [52, p. 169].

In the new configuration of trade and transport links that emerged in connection with advancement of Constantinople, the role of routes running through the Arabian Peninsula increased. «... This new state of affairs brought to the forefront Mecca, a trading city located halfway from Yemen to Syria» [35, p. 466], which was later to play a very important role in the history of not only Arabia, but of all mankind.

In 8<sup>th</sup> century, the expansion of Basra took place in Southern Mesopotamia, through which important trade routes passed connecting «Mesopotamia and the provinces of Southern Iran with Arabia and the distant shores of India and Africa» [53, p. 394]. It should be noted that «Basra, due to its advantageous geographical position... retained its importance throughout the medieval period...» [53, pp. 400–401].

In the same period, due to development of maritime trade between the Middle East, India and China, the state of Srivijaya emerged in Southeast Asia, providing services for transit trade flows and control of sea communications passing through the straits between the Indian Ocean and the South China Sea [32; 52]. It controlled the key coastal areas of what is now Western Indonesia and Malaysia until 13<sup>th</sup> century [54].

It is noteworthy that after the departure of Srivijaya from the historical arena, at the turn of 14<sup>th</sup> – 15<sup>th</sup> centuries, Malacca emerged as the dominant centre of transit trade in the same region, which turned into a large multicultural city where 84 languages were spoken [34]. It is equally noteworthy that approximately 130 nautical miles southeast of Malacca is Singapore, the current largest economic centre of the region. This example shows how stable the geographic factors of advancement associated with transport and commercial communications can be.

In Europe, the transition from Antiquity to the Middle Ages was associated with dramatic

transformations associated with the «Great Migration,» the collapse of the largest state – the Western Roman Empire – and the formation of a number of new states. Naturally, at the same time, «transport and trade connections were transformed throughout the entire space from the Iberian Peninsula to ... the Black Sea» [14, p. 72]. These changes contributed to the loss of significance of many transport and commercial centres, but, subsequently, to the emergence of new ones. As a result of the decline of the Roman road system in the early Middle Ages, «land communication gives way to water communication, causing a corresponding displacement of urban centres... Cities located at the crossroads of communication routes, with the exception for river routes, decline» [55, p. 36].

In 8<sup>th</sup> – 9<sup>th</sup> centuries, transcontinental water trade routes were formed, connecting «Western Europe through the Baltic Sea and the rivers of Eastern Europe with the Arab East and, later, with Byzantium» [56, pp. 372–373].

First, in 8<sup>th</sup> century, the Baltic-Volga route («from the Varangians to the Persians») was formed, connecting the Baltic regions and the Northern Volga region with the Caspian regions. During 9<sup>th</sup> century, the Baltic-Dnieper route («from the Varangians to the Greeks») was formed, which provided the shortest access to the markets of Byzantium and the Middle East [13; 15; 56]. «Transcontinental routes determined the advantages of the geopolitical position of the East Slavic lands – at the intersection of powerful flows of values, multicultural impulses and influences» [56, p. 374].

At the end of 9<sup>th</sup> century, the Baltic-Dnieper route «turned into the largest route in Eastern Europe» [56, p. 375]. It was at this time «in the territory adjacent to ... the path “from the Varangians to the Greeks”» [51, p. 554] Ancient Rus is taking shape – a large, dynamically developing country, in development of which «the priority is foreign trade» [56, p. 376] remained until the middle of 10<sup>th</sup> century. Thus, the use of extensive river communications in the Middle Ages could help bring to the forefront of history not only individual centres, but also new states occupying vast territories.

As for European navigation in the Middle Ages, it developed mainly in two main regions of maritime trade – Northern and Southern. The Northern Sea covered the waters of the North

and Baltic Seas, and the Southern Sea covered the Mediterranean [52; 57]. Communications between these regions were carried out along meridional routes with maximum use of river traffic, and where this was not possible, land traffic [57]. The era of development of Atlantic, ocean communications was still ahead. In the Mediterranean, due to effective development of maritime transportation and commerce, the «northern maritime republics of Italy: Venice, Genoa and Pisa...» became leaders [56, p. 523], competing with each other. In the Northern region of maritime trade, in the first half of 13<sup>th</sup> century, a union of trading cities began to take shape, the advancement of which was facilitated by the effective use of transport communications in the conditions of development of production and trade in Europe – the Hanseatic League (Hansa) [35; 56; 57]. The origins of its creation were the free North German cities of Lübeck and Hamburg, and during its heyday, in the middle of 14<sup>th</sup> century, the Hanseatic League united about 80 cities [57]. Since «for foreign trade partners, the Hanseatic League acted as a single whole» (which did not prevent its members from being independent in all other respects and competing with each other) [35, p. 565], participation in the Hansa contributed to development of trading cities in Northern Europe. This example shows the synergy of transport, commercial and institutional factors, which is disclosed in more detail in [7; 27].

A number of large Northern European trade and commercial centres were partners of the Hansa, and representative offices of the union were located there. Among them are Veliky Novgorod, London, and Bruges, which have become the largest economic centres in their regions, largely due to the transport factor.

The advancement of Veliky Novgorod began in 10<sup>th</sup> century, which was facilitated by its geographical location – it was located on the common, northern section of the Baltic-Volga and Baltic-Dnieper transport routes [15]. In 12<sup>th</sup> century, the transport factor was supplemented by the institutional factor – in Veliky Novgorod, a «form of a free urban community» developed [57, p. 143]. Due to the synergy of these factors, «Novgorod for several centuries was a link between the Russian lands and Western Europe, a centre of economic and cultural exchange», and achieved great success «in trade, construction, crafts, and the spread of literacy» [58, pp. 3–5].

London became a powerful economic centre in 12<sup>th</sup> century, due to development of trade and transport links with one of the leading European regions – Flanders, and the cities of the Hanseatic League [59].

In turn, in Flanders in 13<sup>th</sup> – 14<sup>th</sup> centuries, Bruges emerged as one of the largest European market centres, due to its geographical location, closely connected with the markets of the Hanseatic League, England, Germany and France [60]. However, the subsequent loss of connection with the sea due to the fact that the bay, on the shore of which the port of Bruges was located, was covered with sand, led to the centuries-long decline of the city [6]. The history of Bruges demonstrates very clearly the role of the transport factor both in advancement of economic centres and in their decline.

In 15<sup>th</sup> century, a communication breakthrough occurred due to improvements in the design of sailing ships – sailing in the Atlantic became possible now [13; 14]. This led to the loss of economic leadership by centres located on the shores of inland seas (such as Venice, Genoa, the cities of the Hanseatic League), and the advancement of countries located on the Atlantic coast to leadership – first Portugal and Spain, then Holland, and later England, in which, in turn, socio-economic institutions played an important role [7; 27; 61; 62]. At the same time, «the determining role of maritime trade became obvious, which led to the decline of traditional land routes and, as a consequence, to the decline of the countries through which these routes passed» [61, pp. 150–151].

Although, according to the concept of the «long Middle Ages» [63], it lasted until the middle of 18<sup>th</sup> century, in the last two centuries of this period – in the beginning of the modern era – dramatic changes took place, in which development of transport communications played a key role [7; 14; 16]. Therefore, the importance of transport for formation of the «advancement effect» during this period requires separate consideration.

## CONCLUSION

For approximately five thousand years of existence of ancient and medieval civilisations, transport played an important role in the advancement of certain societies localised within cities, regions, and countries. Their advancement to leadership positions was





achieved due to the synergy of an advantageous geographical location, innovative development of technical means of transport and institutions that facilitate the efficient conduct of transport activities and the development of transport and commercial ecosystems.

In turn, the cessation (for one reason or another) of the beneficial effects of the transport factor led to the loss of leadership positions by societies and the decline of the corresponding economic centres.

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